

June 2017

Issue 17

THE SPECTRUM SHOW

Magazine

WANDERERS

CHAINED IN THE DARK

MIND YOUR LANGUAGE

PROGRAMMING LANGUAGES EXAMINED

FLASHBACK 86

GAME REVIEWS

HARDWARE

SPECIAL FEATURES



Includes material
not in the video
show!

CHEETAH SAMPLER

The hardware sampler
reviewed



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Welcome to issue 17 and thank you for taking the time to download and read it.

Recently I came across an instruction booklet amongst my magazine collection explaining how to connect to Micronet 800. This brought back many happy memories of late night sessions, running up my parents' telephone bill.



For those that do not recall what Micronet 800 was, I did a small article about it in a previous issue, but in essence if you remember teletext on your television, it was like that, only you viewed it via your micro and it was interactive.

It had separate areas for email, chat and software (called telesoftware) downloads. There was also a multi-user dungeon game named Shades that I was hooked on at the time.

It is a shame these services are not archived anywhere, with the possibility to connect via the original hardware. It would be great to link up my Spectrum to it again, to relive all those happy (and expensive) memories.

I did though, find the next best thing, InShades. This is a website that contains a lot of details about the original game and, more importantly, details about how you can play it today.

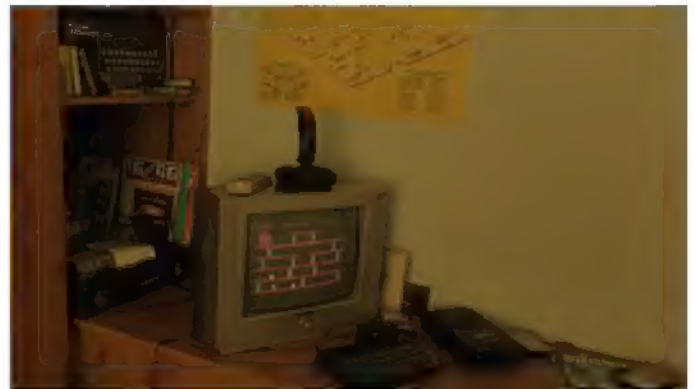
For those interested the link is: <http://games.world.co.uk/shades>.

Armed with this information, I quickly got online and started playing the game again. The full details can be found in the Grumpy Ogre section.

Keeping on the nostalgia trip, I needed some footage for a

new feature in the next series of the show. It had to look like an authentic 80's bedroom complete with portable television and of course my Spectrum.

I set about clearing a corner of the spare room and filling it with Speccy things: Joysticks, games, cassette storage box, printouts and anything else I could think of. I then filmed it without a tripod (to get those authentic shakes) and added a lot of grunge and colour tinting to try to make it look old. It turned out pretty well I think.



Still on the nostalgia and I wanted to build a DOS PC to run some emulators (again for a possible feature in the next series), but after spending a day messing about with a small form factor modern micro PC, I got nowhere. No sound blaster detected (probably because there wasn't one!) and Z80 complaining the computer was running too fast!

I have my spies out looking for a decent 486 in various car boot sales now. Hopefully if I get one, it will be more happy times setting it up and filming it for the feature.

Fancy writing a game review or special feature?

I am always looking for new content and all contributions welcome.

CLIVE IS BACK

With Amstrad taking over the Sinclair brand, Sir Clive has had somewhat of a backseat recently, but now he is back. He has set up two companies that are involved in the future of the computing industry. Anamartic will be working on one of Clive's long standing projects, wafa scale technology while Moduliser, the second company, will be working on the Pandora, the much mentioned but never seen portable computer.

According to the company, the Pandora will now not be Spectrum compatible, but instead will run CP/M and will launch next February.



SMITH HELPS LABEL

Last issue Mastertronic were upset that they had seemingly dropped out of the charts following Gallop's decision to bring WH Smith into the calculation. WH Smith did not sell Mastertronic games and this led to the charts being skewed.

Happily for the budget label, WH Smith have now agreed to stock their titles, meaning it won't be long before their games are back in the charts again.



PIRATE AHOY

Mastertronic is seeking legal action against the company IJK, claiming their game Crimebusters is an exact copy of Spellbound.

Crimebusters notes Harry Price as the author but Mastertronic state the game, originally written by David Jones, has been slightly modified and put on sale for £6.90, while Spellbound is just £1.99.



BEYOND BOUGHT



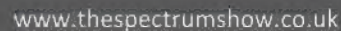
The troubled software house, Beyond has been bought by Telecomsoft and joins other acquisitions in the mid range camp. Along with Firebird, each team will still produce games under their own label, and we may even get to see the now infamous Star Trek game completed and released.

It seems IJK have not just ripped off one game either, they are selling an electron game called Quest For Freedom which is almost identical to Last Of the Free by Audiogenic.

IJK say that Harry sent games to both companies hoping to cash in. Now they have recalled all of their games and are destroying them. They also make a point of warning other software houses to be careful of the author.

It seems odd that IJK have two of these titles and blames the author, and as most Spectrum fans know, IJK, better known as Harry Price, continued with this trend of selling modified games.

Looking back at the classic, and not so classic adverts from the Spectrum's past.



ANT ATTACK Quicksilver 1983



Ant Attack by Quicksilver was, and still is, one of the all time great games for me. When it was released the users were amazed at the graphics, and once they started playing it, it just kept getting better.

The premise is simple, rescue your partner from the ant infested city (Antescher) and get them back to the outside world.

Before you even begin the game was different, in that you could choose to play as a girl or boy. Once decided it was off into the huge 3D city.

The first rescue is easy, the person is just inside the gate. This gives you a good feeling, but gradually the difficulty increases.

To help you locate the person, there is a simple scanner at the bottom right of the screen. If it turns green, you are heading in the right direction. Using this you can quickly locate them, however, you may not be able to see them.

Because the game is real 3D, they could be behind the scenery, but luckily the author, Sandy White, has thought of this, and provides a key to rotate the view through 45 degrees. This gives four different views of the same area. A brilliant idea.

Your mission is also made harder by the huge ants that quickly surround you and begin taking bites out of you. If you run off, they chase you down. You can take care of them in two ways. Firstly jumping on them will disable them, and this can be used as an ideal jumping block to get higher. You can even use it to cheat and get out of the city by other means instead of the gate.

Secondly you can throw grenades at them. You have a set number so you have to be careful, and you can also blow yourself up. You can throw the grenades four different distances, so be careful to choose the right one for the ant's location.

The city itself is massive and scrolls as you run along. There are many different landmarks and buildings to explore, each with their own name. You can even get inside some of them!

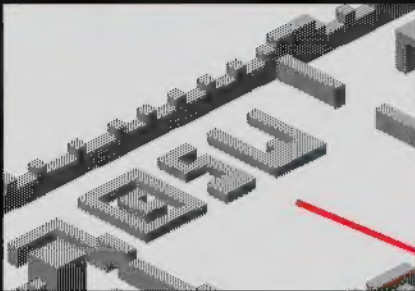
If you run out of ammo, you can get some more from outside the city walls, but it is hidden somewhere in the desert.

This is a great game to play. Easy to control with a nice

learning curve. By the end of it, you will be able to blow up ants easily, jump across stepping stones, and know exactly where you are in the city by the buildings around you. It is like getting to know a real place.

A brilliant game, and definitely worth playing.

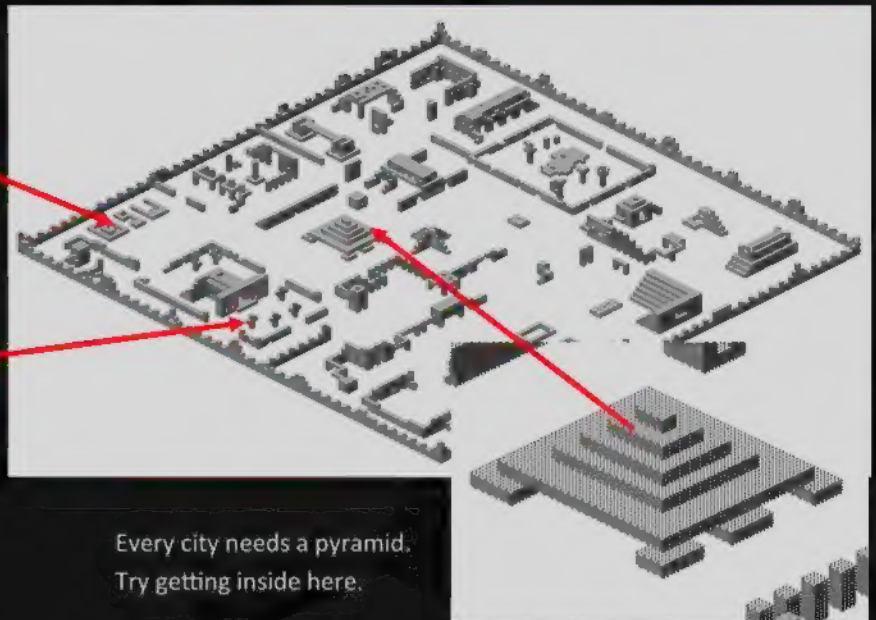
Places To Visit...



The author (Sandy White) made sure his initials were in the game.



Official name: The Ancient, but this is a graveyard folks.



Every city needs a pyramid.
Try getting inside here.



YOUR SPECTRUM COMPO

Your Spectrum Magazine ran a competition, the winner of which would get a huge bundle of Spectrum goodies including a keyboard, Microdrive and ZX Printer. To win you had to first locate the four random places the last person to rescue could be found. Then buy either the Guardian or The Daily Telegraph on 30th March to find an additional question and a telephone number. I rushed out on that Friday morning, bought The Telegraph and scoured the pages. Alas there was no advert. Something had gone wrong, and the final question and number was only printed on The Guardian. Needless to say, I couldn't enter, and felt very annoyed having played the game to death to find the four locations. Damn them....

GAME REVIEWS



This is somewhat of an original game, at least I haven't seen anything that resembles the game play in all of the games I have played for the Spectrum, and that's quite a lot.

You control a large smiling head that can float about inside a gold mine. From the roof, randomly, drops gold nuggets and at the bottom of the screen are two collection bowls.

Using a limited number of platforms (seen on the left of the screen) you have to build pathways that allow the nuggets to drop into the bowls.

To get in your way is a nasty floating skull, just the one on the first level though, but even so, it soon gets annoying. Not only do you have to avoid hitting it, but it can also remove the platforms you have built.

The action is constant and there is a lot to think about here, and a lot to keep you busy.

As you progress, another skull will appear making things even harder, and you have to keep moving all the time trying to keep those nuggets dropping into the bowls.

You can remove platforms and place them somewhere else by just moving over them, pressing fire and then moving to



the new place and pressing fire again.

The graphics are large and well animated and move smoothly but there is one major problem with this game, the sound. There isn't any. None at all. The game plays in silence, which is a real shame as the game code is only a little less than 5k, that's less than the loading screen, so there is plenty of room for them.

An interesting and challenging game then, let down by lack of sound...

MOON ALERT!

© Ocean Software 1984

Moon Alert is, if you can't guess by the screen shots, a Moon Patrol clone. The aim is to reach the last screen on the last level, traveling left to right across a scrolling landscape.

There are craters, boulders and aliens to contend with, so your buggy has to be agile. It can jump, fire in two directions (up and forward) and speed up or slow down. The speed allows the buggy to jump further, especially useful for large craters with boulders on the rims.

The landscape scrolls at two speeds which is a nice effect, and although a bit flickery, your buggy is large and well animated.

The variety of aliens start arriving around level B and start dropping bombs. These have to be avoided as they will destroy your buggy or create craters in the surface on later levels.

The gameplay is good with nice sound and responsive control, but sadly the enemy tanks from the arcade are not present. The craters gradually become more tricky to navigate, with different levels and rock formations.

When you reach the end of six levels, you are greeted with the music from Indiana Jones and left to continue on your way.

This is a great game that can be very tricky to master, and is generally known as one of the better Moon Patrol clones for the Spectrum.

Go and give this a try if you like the arcade version, or like a good challenging action game.





RAM TURBO INTERFACE

There were a few ROM interfaces for the Spectrum, and I covered this subject back in episode 21 of the show and reviewed Sinclair's offering in issue 2 of the magazine. Sinclair's Interface Two was obviously the first one, but it wasn't long before other companies were looking to cash in on the ROM games. History tells us that this little venture failed miserably, but the companies did not know this.

RAM Electronics produced a lot of different interfaces for the Spectrum including RAM Print and the RAM Music Machine, so it was no surprise when they began advertising their RAM Turbo.

Using the same sleek design as many of their other interfaces, the unit itself is slightly larger than Sinclair's offering, with stylish fins along the top that, although looking nice, are a massive dirt magnet.

The interface has a pass through port so you can connect other things like a ZX Printer and the version two models added a reset switch.



The interface includes joystick ports, two of them, but RAM goes further than Sinclair and provides both Sinclair and Kempston standards. The unit automatically switches between them too, so there is no manual buttons.

Once plugged in, it operates in the same way as other ROM units. Pop open the top flap. Insert the cartridge of your choice, power on the Spectrum and play. It doesn't get much simpler.

There is not a lot to add other than that. It does what it was designed to do, and by offering a Kempston option and reset switch, it had more features than the others.

What no ROM interface had, which is odd, is a power switch. You had to turn the power off to swap the cartridges, so why not just add a simple toggle switch? One of the first things to break on the Spectrum was the power connector from all the constant pulling and pushing in the plug to reset the machine after playing a game.

RAM did add a safety feature though, a small plastic loop that stops you plugging, or unplugging the interface while the power is on. This is not a bad idea, and they used it on several of their interfaces.

A sleek, functional interface then with auto swapping joystick modes, rugged design and reset button.



GAMES ON REAL TAPE

DEEP CORE RAIDER



Navigate the danerous caverns to get the riches before anyone else.

TOOFY IN FANLAND



Help Toofy get back his stolen nuts from the strange and mysterious maze of fans



<http://cronosoft.org/ram.com/>



MIDNIGHT RESISTANCE

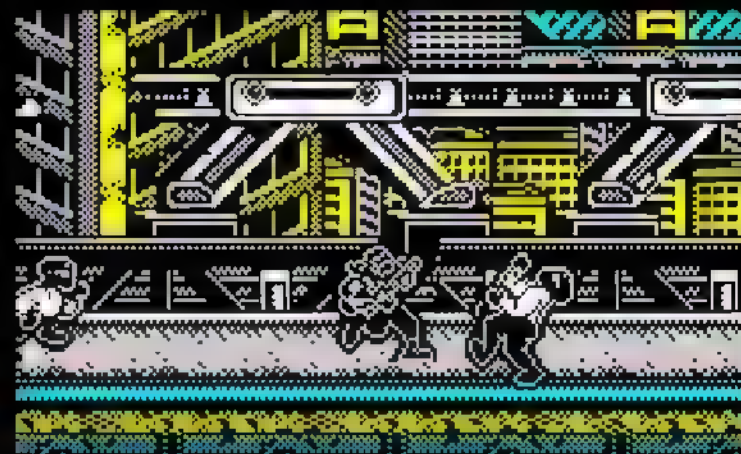
Ocean Software 1990

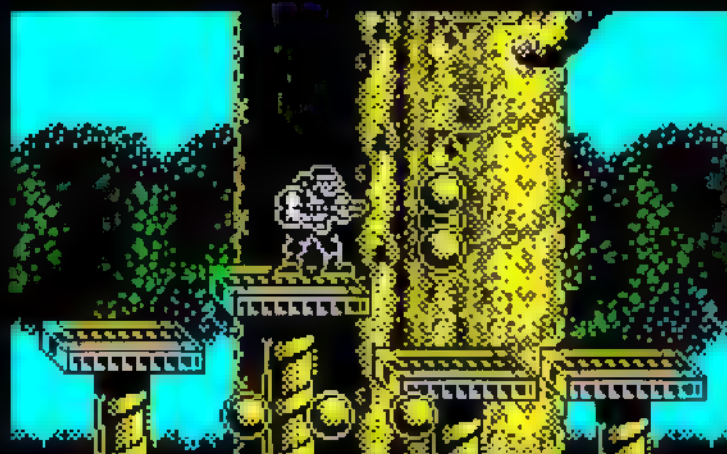
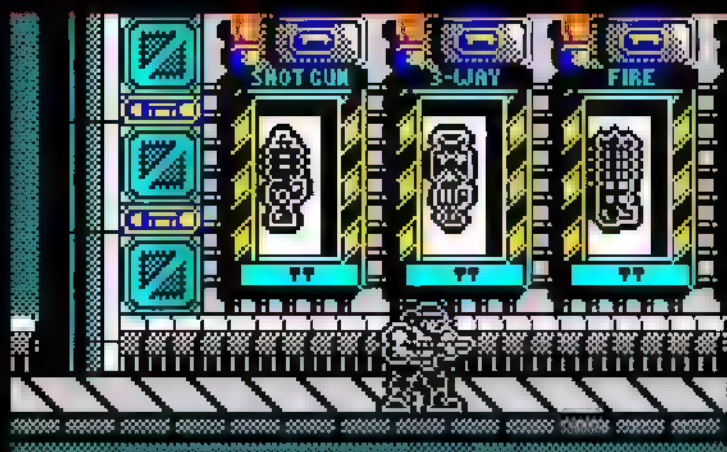
Midnight Resistance is a classic run and gun game released into the arcade in 1989 by Data East and it had many unique gameplay elements. The plot revolves around rescuing your family from someone named King Crimson, at least in the arcade and Spectrum versions, other versions varied. There are level bosses and weapon upgrades and all manner of places to walk, jump, crawl, drop and climb through.

On the 48k version we get nice graphics and good sound effects with the game moving along at a fair pace although the smooth continually scrolling of the arcade is replaced by push scrolling, and with the difficulty lower than the arcade machine, it makes for a fine game. The 128k version provides some excellent music as the game plays.

The graphics are really well done, with some great sprites and colourful backgrounds. Each of the levels looks very distinctive, being very close to the arcade counterparts and making the best of the Spectrum's resolution and colour palette.

The first level is sufficiently easy to introduce the player to the control system, which is basic run and gun. You move from left to right dispersing enemy soldiers as you go. You can shoot at different angles so you take out soldiers above you or diagonally opposite. This is particularly useful on the first level with enemies placed on scaffolding.





As each enemy guard dies, they leave behind a token. Collecting these is essential as you use them later to buy better weapons. At the end of the level 1 there is a large tank to take out, and this is quite easy as long as you dodge the shots. Once this is gone you can climb the ladder and enter the shop.

Shops are found at the end of each level and provide means to spend your tokens and either buy new weapons or upgrade existing ones. The weapons vary and the one you choose will depend on the type of player you are. There are homing missiles, triple shot and shower, each having their own firing effect. Choosing the right weapon for the job is down to familiarity with the game and which level comes next. A good choice should make things easier.

As the levels progress, the different stages of the arcade version are presented in glorious Spectrum-vision and the developers have done a fabulous job here. With all this going on, with enemies, animated backgrounds, enemy shots and your weapons, often filling the screen with sprites, there is no slow down which is very impressive.

This game is not easy as you proceed through the levels, and things get gradually harder, in fact too hard for me, so I had to revert to watching the RZX playback to see the full game. It is well worth watching this if you can't get that far, as the backgrounds are very impressive.

Sound is used well and the music adds that little bit extra, and for any 48k owners that were thinking about the upgrade to the newer machine, then games like this would have certainly helped them choose.

Knowledge of the arcade game will also help, as the stages have been replicated in great detail.

This is generally known as one of the best games for the Spectrum, and it is easy to see why.

Everything fits together so well and you just want to get back in and have another go.

A truly brilliant game.

BLADE WARRIOR

Code Masters 1988

Do you like creepy storylines? Here's a good one. In 1479 poor townsmen from Loxton killed, by decapitation, their evil master Squire Helfyre. But their misery was not over because Helfyre's manservants laid his headless corpse in a secret tomb and revived him. He became a Death Demon and the only way to defeat him was to find his missing skull and bring it to the tomb. Two hundred years later a hero called Blade Warrior tries to complete this task. It's not easy because he has only 10 minutes to do it and Helfyre's skull isn't the only object to find.



You may think that the story above is a beginning of an arcade adventure with a lot of monsters to kill with your blade but, unfortunately, it's not. Blade Warrior is a simple platform game with many creatures, obstacles and a lot of jumping.

You control Blade Warrior but you can't use any weapons (which is odd because there is a sword attached to the hero's belt). It means that you can't kill enemies and the only way to survive is avoiding them.



You also have to avoid many obstacles like barrels, spikes and flames because they are deadly.

There are 7 objects to find in a specific order - when you collect one object another one appears somewhere. The game area is quite small (about 25 rooms) but it doesn't mean that completing this game is easy. On the contrary, the difficulty level is very high. You have to be very quick and your jumps must be pixel perfect. Touching an enemy or obstacle means instant death and you only have 4 lives. There are a few rooms where you must react immediately after entering and if you visit those rooms for the first time, losing a life is inevitable.

Graphics in Blade Warrior look good, they are varied and colourful with smooth animation. During the game there are 4 sound effects and 1 of them are sampled speech. The quality of sampled sounds is good but when you hear the scream of the dying hero for the hundredth time it starts to be annoying.

Blade Warrior was published by Code Masters but it's not one of their best games. The biggest disadvantage is exaggerated difficulty level. This game is just too hard to be enjoyable.



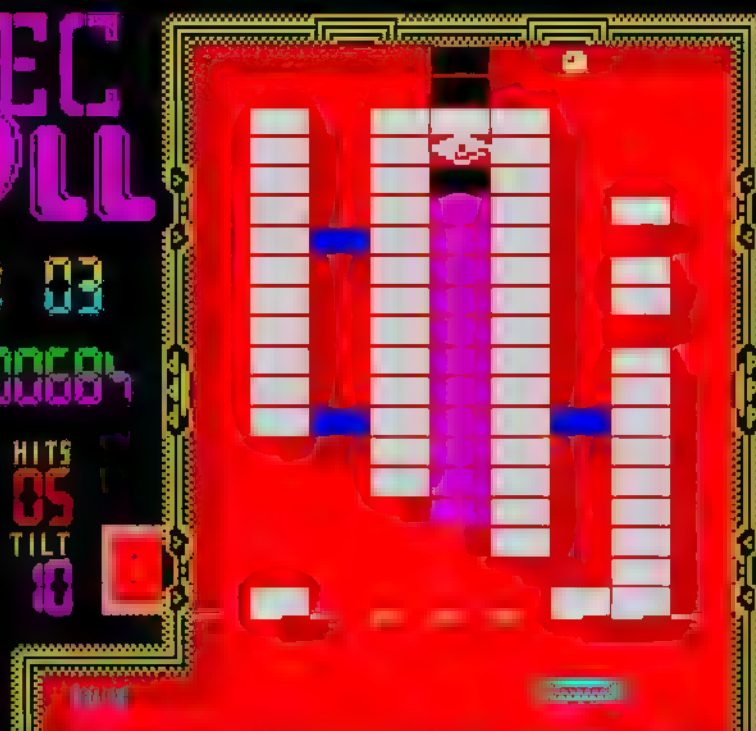
Review By:
Piotr "PopoCop"
Szymanski

SPEC BALL

LEVEL: 03
SCORE: 00004

BALL
07
SPEED
20
TIME
5

HITS
05
TILT
10



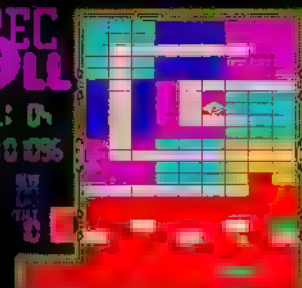
SpecBall 2018

SPEC BALL

LEVEL: 04
SCORE: 00006

BALL
07
SPEED
20
TIME
5

HITS
05
TILT
10



SPEC BALL

LEVEL: 05
SCORE: 00008

BALL
07
SPEED
20
TIME
5

HITS
05
TILT
10



Specball is a conversion of the 1983 Enterprise game Enterball in 1988, and as you can tell, it's an Arkanoïd style game but with a few differences. There is no need to explain this type of game, but the additions set it apart from the usual bat and ball game.

To get to the next level, instead of clearing all of the blocks, you have to hit the oval shape. This means that some screens, if you are lucky, can be cleared in a few seconds, while others take much longer.

You also do not get falling bonus items like other games, instead there is a small area at the bottom left of the screen that occasionally gives up items. These include extra lives, speed up, slow down and mystery items... some of which remove a lot of the blocks on screen.

You have to be careful though, you can get the bat trapped inside here as the area is only open for short periods of time.

The levels are random after the first screen, so you are never sure which one you'll get. Some are very hard, and the space between your bat and the lower bricks is tiny. This involves a lot of precise bat control to get through.

You also have to watch out for the portals on either side,

these transport your ball to the opposite side of the screen very quickly. This can be useful or disastrous, depending on the current screen and the current state of any missing blocks.

There are the usual indestructible blocks too, and these are placed strategically to make the levels more challenging.

The graphics can't really be rated, as they are mainly square blocks. The bat and ball move smoothly enough and control is good.

Sound is limited to a block being hit and a level change.

It's not often we see this style of game being released, and it's a nice little addictive release.

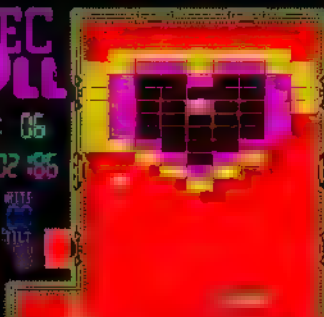
Worth a play.

SPEC BALL

LEVEL: 06
SCORE: 00010

BALL
07
SPEED
20
TIME
5

HITS
05
TILT
10



CHASE H.Q.

There are many driving games for the Spectrum, but most of them are racing games. Chase H.Q. adds something new to the genre - you don't compete in a race but chase criminals in the streets of Los Angeles. The main characters are two cops from Special Criminal Investigation squad. At the beginning you receive a message from Chase Headquarters - a woman called Nancy gives you the details about the criminal and his vehicle. After this you start the engine of your Porsche 928 and the chase begins.

First you must catch up to the criminal and then stop him. The sound of police siren isn't enough for a fugitive to surrender, so you must damage his car by ramming it many times. The distance to the criminal's car is displayed on the control panel and counts down as you get closer. This section is very similar to Outrun, with traffic and other obstacles to avoid, but the gameplay is much smoother.

Once you reach the criminal's car, you have to continually ram it to do damage. When it becomes a wreck and undrivable, it stops and you can arrest the fugitive. This ends the level and the next one begins with Nancy telling about your next target.

The game consists of 5 chases, each one becoming more difficult. You have a time limit to catch up the fugitive and another limit to stop him, so it is a hectic game. The streets of L.A. are not empty, there are many other cars, objects on the road and on the side. Hitting them slows you down and if you hit too many objects you probably won't catch



THIS IS SPECIAL INVESTIGATION AIRBOR



up the criminal. There are also forks in the road (like Outrun) and you should choose the correct route. Luckily this is indicated by an arrow or a message from a police helicopter.

giving you info on which way to go. You have 3 turbos for every chase and it's recommended to keep them for ramming rather than the initial catch-up phase.

Chase H.Q. was converted from coin-op machine and the authors of the Spectrum version did a great job (play the mediocre Amiga or C64 version and see the difference). Graphics and sound are excellent, action is fast and smooth and the car looks really nice. There are many neat touches from the coin-op included, for example sparks when you scrape the sides in the tunnel or visible damages of the rammed car. There are also extras, like mugshots, not present in original game.

Chase H.Q. runs on a Spectrum with 48k of memory but on 128k machines sound effects are much better and include samples.

This is one of the best driving games for the Spectrum and is highly recommended.



Review by: Piotr "PopoCop" Szymanski

The Arcade Game

Released in 1988 by Taito, this game had a good reception. The graphics are large and smooth, as you would expect, with some great digitised speech and music.

Gameplay is fantastic providing an exciting experience, especially as you try to ram the bad guys with the timer running down.



SWORDFIGHT

AT
MIDNIGHT

Sunshine Books 1983

Swordfight, or to give it its full name, Swordfight at Midnight is, according to the cassette inlay, more of a simulation than a game. There are instructions if you can be bothered sitting through the presentation that soon becomes boring.

The game has 5 difficulty levels ranging from impossible to easy, and playing on easy proves difficult, so don't even bother with the other levels.

You control your fighter using five keys; left, right, parry, thrust and prepare. Parry blocks your opponent's thrust, thrust does what it says and attack, again, does what it says. Prepare brings your sword back over your shoulder and should be followed by a thrust to deliver a more powerful blow.

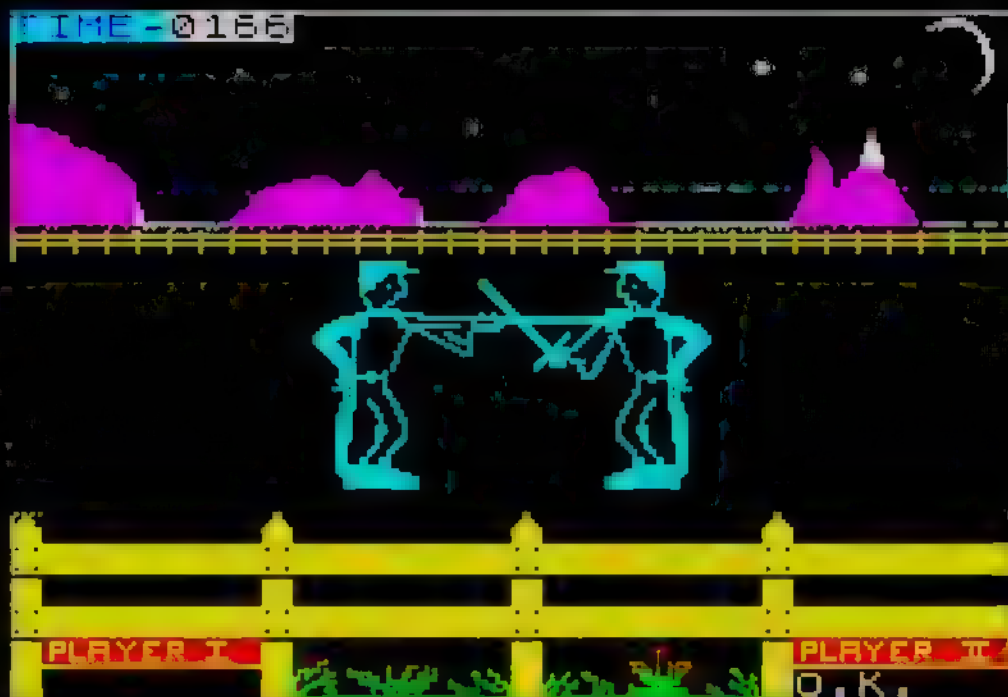
After a bit of practice in two player mode it became apparent that you cannot just stand there in the thrust position, you have to hammer the thrust and prepare keys to continually deliver blows.

So armed with that it's time to take on the computer.

It's straight in for the attack and you are player two when you fight the computer, and can see your health status bottom right. Hammering the keys will eventually see one of you dead, if you are lucky it will be the computer, but that will be a very rare occurrence.

That's it. That's the entire game... sorry... Simulation!

There is no real skill involved, just luck really. You could try



to parry, but it won't really work.

The graphics are line drawn and there is no animation as such. The characters just switch positions. The background is just there to fill space and I'm not really sure what it is supposed to be, is that a lighthouse or a phallic symbol?

Sound is minimal with just a few clicks and a terrible siren when you die. At least it doesn't play the death march!

It's a pretty bad game really, even for a 16k one. No skill, no progression, just luck. If you win, you just start the game again and select a higher level rather than progressing on naturally.

Oh well... play these games so you don't have to.

BILLY BOBONG

MC Lothlorien 1984

I am not sure how to describe this game, apart from the stereotyping. It is a nice little platformer with elements of Panic thrown in.

Reading the instructions (in an Australian accent) gives the brief outline. While out walking you come across some aliens and feel the need to kill them, the only thing you have at your disposal however, is your trusty boomerang.

The screen presents itself with a nice looking set of platforms with continually moving lifts at certain points. Moving around on the platforms are aliens.

Once an alien is on the same level as your character you can throw your boomerang, however, unlike a proper boomerang, it doesn't come back. This means you have to rush to where it fell and pick it up before you can kill any more.

This causes problems, because very often you will have two aliens in the same place, and killing one means the second one will kill you because you can't get to your boomerang. You can try to use the lifts to get away, but those pesky aliens will chase you down. If you are on the top levels, there is also a cloud that floats around dropping acid rain onto you!

Once you clear the first screen, you move on with a new layout and new aliens to kill. There are five different levels with ten types of aliens. You can also earn extra points by throwing your boomerang at the vines to get the apples, that is, if you have time.

The graphics are large and well-drawn and move smoothly, with control being a little sluggish. Sound is not too bad considering, and certainly works with the game.

Gameplay is simple enough, but can become frustrating when your boomerang is stuck where you can't get it and you are being chased by an alien. You are inevitably killed, fall headlong to the bottom of the screen and lose a life.

The game does have bugs that cause it to crash, but there is a fixed version available, so make sure you get that one.

An average game then, and one to try only if you like Panic style games.

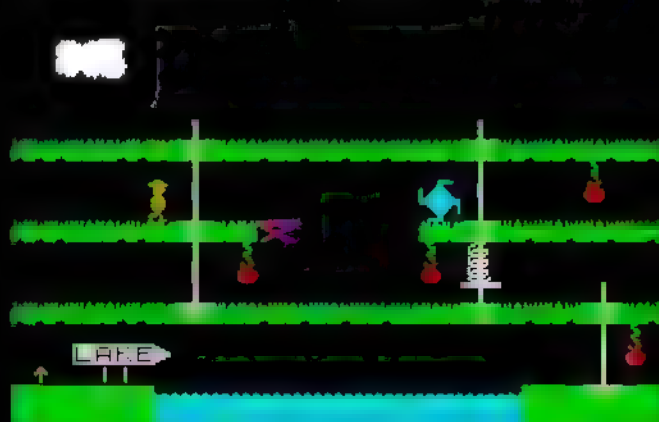
SCORE 001150

LIVES



SCORE 005300

LIVES





MIND YOUR LANGUAGE

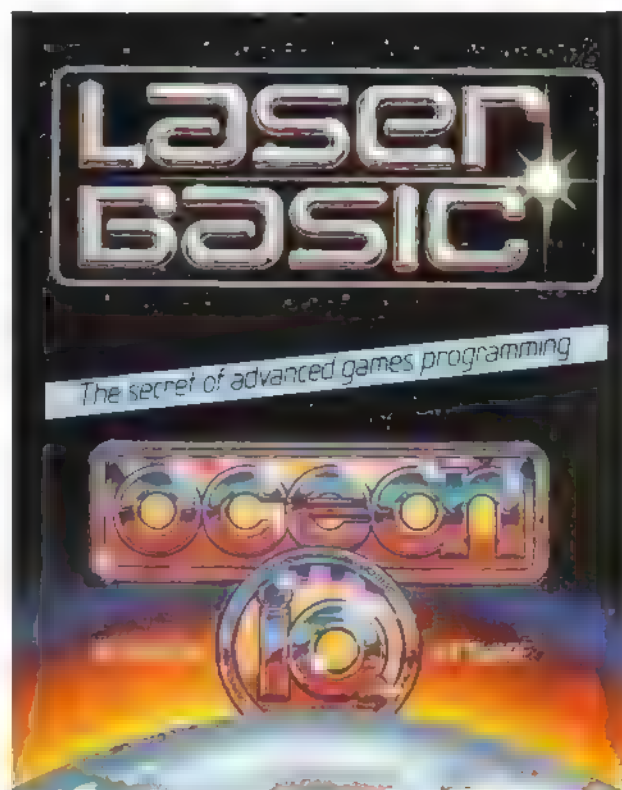
George Beckett continues his voyage through Spectrum programming languages

Last issue we looked at Sinclair BASIC and provided an example game that will be used throughout this series. Now we move on to alternatives.

Some Spectrum users outgrew the capabilities of Spectrum BASIC, looking for something that was more performant or at least better able to nurture good programming techniques. As with other software, the Spectrum was (and is) well-served for programming languages.

One of the most obvious next steps was to use an extension or alternative to the built-in BASIC. A number of such extensions were developed, providing everything from extra development tools, through specialised libraries, to more comprehensive BASIC implementations.

Most extensions built on the functionality provided by the Spectrum BASIC in ROM to reduce the need to re-implement existing features, and integrated with the standard editor environment to provide a familiar experience.



Laser Basic

One popular extension was Laser Basic, from Ocean. It provided a library of additional commands aimed at graphics and games programming, which better enabled real-time, arcade-style games to be developed in BASIC. No longer was the programmer limited to 8-by-8 user-defined graphics and character-cell-based movements (as in Rabbit Run, our example game). Instead they could create large, high-resolution sprites that could then be overlaid on the screen and moved or positioned with pixel precision.

The extra commands, in Laser Basic, are four-character codes preceded by a period – e.g. .PTBL prints a sprite to the screen. Command parameters are defined separately, by assigning values to a small number of pre-defined variables, such as .ROW and .COL which are used to hold sprite coordinates. The compact (4-character) command structure makes it a little difficult to remember commands, plus the disassociation of parameters from the commands takes a little getting used to. However, Laser Basic provides lots of performant, sprite manipulation commands, making it possibly one of the easiest ways to work with graphics on the Spectrum.

To illustrate how Laser Basic works, we have ported the original Rabbit Run game to use the extra capabilities (see fig.1 for examples. Laser BASIC changes highlighted). The main changes relate to the use of sprite commands instead of UDGs. However, we have also implemented Laser Basic's keyboard scanning functions (lines 110–140), since this allows multiple, concurrent key presses to be detected, which can improve the usability of a real-time arcade game. We also capitalised on the faster graphics performance by adding an extra element to the game: a fox, which appears after a little time, and chases the rabbit around the garden.

When running Laser Basic, the usual UDGs are not available. I did not realise this at first, so ended up writing UDG data into the program space for Laser Basic, which led to some odd behaviours and instability. Instead of UDGs, graphics must always be encoded as sprites, which first need to be defined. For larger sprites, Laser Basic provides a Sprite Generation program; a graphical interface

Fig.1

```
10 REM Rabbit Run
20 GO TO 9000
100 REM Main Game Loop
105 LET ox=x: LET oy=y
110 .ROW=1: .COL=1: LET k=0: LET l=1: LET s=0
115 .SPN=1: LET n=1: LET i=0: LET j=0: LET k=0: LET l=1
130 .ROW=1: LET k=78BP: IF k THEN LET y=y+(y<30)
140 .COL=1: LET k=78BP: IF k THEN LET y=y-(y>1)
145 IF x=ox AND y=oy THEN GO TO 200
150 BEEP 0.002,1
160 .BEEP.
170 .ROW=1: .COL=1: LET k=0: LET l=1: LET s=0
180 .SPN=1: LET n=1: LET i=0: LET j=0: LET k=0: LET l=1
300 REM Check for molehill
310 IF ATTR (x,y)<>2 THEN GO TO 400
320 PRINT AT x,y: INK 2: FLASH 1: "<Graphic-A>"
330 FOR n=-20 TO -30 STEP -1
340 BEEP 0.05,n
350 NEXT n
360 .ROW=1: .COL=1: .ATON: .PTBL: .ATOF
370 LET l=l-1: PRINT AT 0,22;l
380 IF l=0 THEN STOP
400 REM Move fox
410 IF NOT fox THEN GO TO 500
420 IF fox=1 THEN LET fox=2: .ATON: GO TO 480
430 IF INT (RND*2) THEN LET gx=fx+SGN (x-fx): LET gy=fy: GO TO 450
440 LET gx=fx: LET gy=fy+SGN (y-fy)
450 IF ATTR (gx,gy)=2 THEN GO TO 500
460 .SPN=1: .ROW=fx: .COL=fy: .ATON: .PTXR
470 LET fx=gx: LET fy=gy
480 .SPN=3: .ROW=fx: .COL=fy: .PTBL: .ATOF
500 REM Check for food
510 IF ATTR (x,y)<>4 THEN GO TO 600
520 BEEP 0.003,20
530 .SPN=1: .ROW=x: .COL=y: .ATON: .PTBL: .ATOF
540 LET s=s+1
550 PRINT AT 0,7:s
```

in which to develop sprites and then package them for inclusion in your program. However, Rabbit Run only needs four 8-by-8 sprites, so I've elected to generate them within the program (lines 9200–9330 see fig.2).

The Laser Basic version of Rabbit Run is more 'spritely', though the speed of play does change when the fox appears, due to the extra instructions that are then executed on each iteration. Getting the timing right for an arcade game is very difficult in BASIC (even Laser Basic) due to the noticeable time it takes to run each sequence of commands and the inevitable pauses introduced by commands such as BEEP. It may be possible to reduce/eliminate this speed change by executing the fox code even when the fox is not in play, though tricks like this become impractical as the complexity of a game grows.

Laser Basic does also include some more generic extensions and tools. It includes a rudimentary procedure construct along with development tools for renumbering the BASIC source and for tracing the flow of execution of the program. These allow

the programmer to add some more structure and modularity to their program, plus simplifies common refactoring tasks that become important as the scale of a program increases.

Ocean released a companion product to Laser BASIC, called Laser Compiler, which could convert Laser BASIC programs into native machine code, eliminating the need for real-time interpretation of the BASIC instructions and the need to distribute the BASIC source of a program to potential customers for your game. People often expect BASIC compilers to dramatically speed up their programs (and often compiler vendors nurture this expectation). However, my experience is that compiling high-level languages like BASIC generally does not lead to huge speed-ups and is more about protecting the source code.

The process of compiling a Laser Basic program is relatively straightforward, so I tried using Laser Compiler with the Laser Basic version of Rabbit Run. However, while the program compiled without any errors or warnings, it caused a crash whenever I tried to run it, which—based on the screen display—looked to be occurring somewhere in the generation of sprites (in line 9200—9330). I was unable to find any bugs in my program that could cause the crash (plus the program ran without problems in Laser Basic), so I decided to re-implement the sprite-creation routine by directly POKE-ing the sprite data into memory (see fig.3).

With the alternative sprite-generation routine, the program did compile and run without problem. It also led to a modest speed improvement, making the game feel even more spritely (same pun). However, the game still suffers from a change in timing when the fox appears in the garden.

Beta BASIC

A less well-known though very good extension is Beta BASIC, from Betasoft. It provides significant additional functionality, including extensions to the Sinclair BASIC language, development and debugging tools, and an optimised runtime to make BASIC programs run faster.

Beta BASIC boosts the core BASIC instruction set of the

```
9200 REM Set up sprites
9210 RESTORE 9900
9215 .ATON
9220 FOR m=1 TO 4
9230 READ i: PRINT AT 0,0; INK i;" "
9240 FOR n=0 TO 7
9250 READ a: POKE 16384+256*n,a
9260 NEXT n
9270 .SPN=m:.HGT=1:.LEN=1
9280 .ISPR
9290 .RDW=0:.COL=0
9300 .GTBL
9310 NEXT m
9320 PRINT AT 0,0; INK 7;" "
9330 RETURN
9400 REM Set up new game
9410 LET t=0: LET x=10: LET y=16
9420 LET fox=0: LET fx=1: LET fy=1
9430 .SPN=1:.ROW=x:.COL=y
9440 .PTBL
9450 LET l=3: LET s=0
9460 PRINT AT 0,0; INK 6;"SCORE          LIVES          "
9470 PRINT AT 0,7;s;AT 0,22;l
9480 RETURN
9900 REM Sprite data
9910 DATA 7,66, 66, 60, 126, 90, 126, 102, 60
9920 DATA 2,0, 60, 126, 126, 126, 126, 60, 0
9930 DATA 6,0,102,102,60,60,60,24,0
9940 DATA 7,0,102,102,60,60,60,24,0
```

Fig.2

```
9200 REM Load sprites into memory
9210 RESTORE 9900
9220 FOR n=56519 TO 56575
9230 READ a: POKE n,a
9240 NEXT n
9250 POKE 62464,199: POKE 62465,220: REM Start of sprite
memory
9260 POKE 62466,255: POKE 62467,220: REM End of sprite memory
9270 RETURN
9910 DATA 1, 213, 220, 1, 1, 66, 66, 60, 126, 90, 126, 102,
60, 7: REM Sprite 1
9920 DATA 2, 227, 220, 1, 1, 0, 60, 126, 126, 126, 126, 60,
0, 2: REM Sprite 2
9930 DATA 3, 241, 220, 1, 1, 0, 102, 102, 60, 60, 60, 24, 0,
6: REM Sprite 3
9940 DATA 4, 255, 220, 1, 1, 0, 102, 102, 60, 60, 60, 24, 0,
7, 0: REM Sprite 4
```

Fig.3



Spectrum, adding support for: screen manipulation (windows, multi-direction scrolling, and different character sizes); better string handling including array sort and search; and many new numerical and string-handling functions. Better still, it implements some important flow-control operations such as DO-WHILE loops, multi-line procedures, and scoped variables (e.g. local variables in procedures), which makes it possible to develop better (in terms of software good practice) and more modular programs.

Beta BASIC also provides tools to simplify development and debugging—including operations to renumber, reorganise, and refactor a program, plus a trace mode for debugging.

Beta BASIC modifies the runtime environment to make programs run faster. It re-implements branching, so that GOTO and GOSUB statements complete in a fixed time irrespective of whether the destination is near the start or the end of the program. It implements an optimised FOR loop, when used with integer indexing, and provides faster implementations of: maths functions, such as the random-number generator and trigonometry operations; the circle command; and the SCREEN\$ function (which has also been enhanced to work with user-defined graphics).

The downside of Beta BASIC is that it consumes an additional 18 kilobytes of memory (located at the top of RAM), though you do get a lot extra to compensate for the lost memory. If memory is likely to be an issue, then you should consider the 128k version (Version 4.0), which—as well as providing the features noted above—adds command extensions to array handling and file handling to effectively exploit the additional memory.

Our previous implementation of Zeller's Congruence could be written in Beta BASIC as follows (see fig.4 again with key changes highlighted). This implementation overcomes some if not all of our hypothetical programmer's concerns for the Spectrum BASIC version. Most notably, there are two new constructs—the DO ... WHILE loop and DEF PROC—which allow us to significantly improve the structure of the program and to constrain the scope of working variables.

The above discussion and example only scratches the surface of Beta BASIC. If BASIC is the language you are interested in, then I encourage you to spend some time to get familiar with

Fig.4

```

10 REM Setup
20 RESTORE 9200
30 DIM d$(7,9)
40 FOR n=1 TO 7
50 READ d$(n)
60 NEXT n
100 REM Calculate day
110 LET i$="y"
120 DO WHILE i$="y"
130 INPUT "Day (1-31) "; q
140 INPUT "Month (1-12) "; m
150 INPUT "Year (4-digit) "; y
160 LET d=0
170 day q, m, y, d
180 PRINT "Day = "; d$(d)
190 PRINT #1; "Want another day? (y/n) ";
200 LET i$=INKEY$
210 IF i$="" THEN GO TO 210
220 PRINT #1; i$
230 IF i$="Y" THEN LET i$="y"
240 LOOP : REM END WHILE
250 STOP
9100 DEF PROC day q,m,y, REF d
9110 IF m<3 THEN LET m=m+12: LET y=y-1
9120 LET j=INT (y/100)
9130 LET k=MOD(y,100)
9140 LET d={q+INT (13*(m+1)/5)+k+INT (k/4)+INT (j/4)+5*j}
9150 LET d=MOD(d,7) + 1
9160 END PROC
9200 DATA "Saturday", "Sunday", "Monday", "Tuesday",
"Wednesday", "Thursday", "Friday"

```

Beta BASIC.

If you still need convincing, then one last Beta BASIC extension of particular note (no pun intended) is a non-blocking sound command in Version 4 for 128k models, named BEEP!, which adds sounds to a queue for the AY-3-8192 sound chips and allows the program to continue on without interruption—that is, not waiting for the sound to be played. This presents a significant opportunity for games programmers, which we can illustrate with an improved version of the Rabbit Run game.

In the version of the Rabbit Run, the BEEP commands are replaced by BEEP! commands (except for when the rabbit falls down a hole, as we do want the game to pause at this point). We have also used the optimised implementation of the RNDM and MOD functions. Otherwise the game is written as previously, though will also benefit from the implicit performance improvements from the Beta BASIC runtime.

To start this version of the game, you simply type RUN; In Beta BASIC, the performance of the main loop is unaffected by its location in the program, so we do not need to engineer

it to be as close to the top as possible. Also note that when you first load the program into Beta BASIC, you need to enter the commands "KEYWORDS 0" to ensure that graphics characters display correctly.

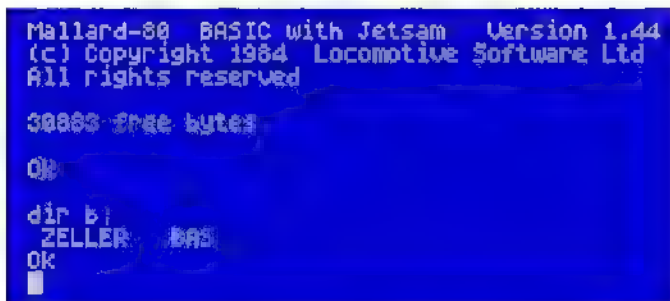
The optimised BASIC runtime, coupled with the non-blocking BEEP! command makes the Beta BASIC version of Rabbit Run comparable with the Laser Basic version. Because of this, I've also included the fox character that I introduced for the Laser Basic version.



Versions of Rabbit Run can be downloaded from:

www.thespectrumshow.co.uk/basic

Mallard BASIC



Beta BASIC works on all versions of the ZX Spectrum up to the +2. However, it does not support the +3 and +2A models. If you own a +3 (or a +2A with a disk drive), then you might want to try a completely different implementation of BASIC, which is distributed with Locomotive Software's port of the CP/M operating system for the Spectrum +3.

The Computer Program/ Monitor—more commonly known as CP/M—was a popular operating system in the 1970's and early 1980's, developed by Digital Research and available for a range of microcomputers running the Intel 8080 (or Zilog Z80) processor. By the mid-80s, most CP/M users had moved to MS-DOS but by then there was a substantial cata-

logue of business-oriented and more serious software available for CP/M, which persuaded Locomotive Software to port their CP/M implementation from the Amstrad PCW and CPC ranges of computers to the Spectrum +3.

Locomotive Software's CP/M included a version of BASIC called Mallard BASIC which, while not having the graphics and sound support of ZX BASIC, was a more complete (and more portable) implementation of BASIC focused on data handling and file-access, to support business-orientated applications.

Mallard BASIC has good support for variable handling: As well as (floating-point) numbers and strings, it includes two new variable types for integers and double-precision numbers. It also supports multi-character variable names across the board, including for arrays. Flow control is more flexible than in Spectrum BASIC: the IF statement supports the ELSE clause; there is a branch statement called ON, which when coupled with GOTO or GOSUB allows multiway branching; there is a WHILE...WEND construct; and an END statement to gracefully delineate different parts of the program. Perhaps surprisingly Mallard BASIC does not support procedures, so program variables almost always have global scope.

(String and numeric) data handling is well supported in Mallard BASIC, with a built-in function set quite a bit larger than in Spectrum BASIC. However, Mallard BASIC particularly excels when it comes to accessing file-based data structures, in record-based and keyed databases, and really showcases the advantages of a disk-based microcomputer in a way that neither +3 BASIC nor the ZX Interface 1 BASIC extensions were able to.

The lack of graphics and sound support make Mallard BASIC an unsuitable platform for the Rabbit Run game. However, it is possible to create a reasonable implementation of Zeller's Congruence, as listed in fig.5.

This is very similar to the Spectrum BASIC version, though several points are worth noting:

1. Any DEF FN commands have to be executed, for the corresponding function to be available in the program, hence the GOSUB 9000 command near the start of the program.

```

Ok
load "Zeller.bas"
Ok
list
10 REM Compute day names using Zeller's Congruence
20 GOSUB 9000
30 DIM day$(7)
40 FOR n%=1 TO 7
50 READ day$(n%)
60 NEXT n%
70 i$="y"
80 WHILE LOWER$(i$)="y"
90 INPUT "Day (1-31) "; d
100 INPUT "Month (1-12) "; m
110 INPUT "Year "; y
120 IF m<3 THEN m=m+12: y=y-1
130 j=FIX (y/100)
140 k=FN m(y,100)
150 PRINT "Day is "; day$(FN d(d, m, k, j) + 1)
160 PRINT "Want another day? (y/n) ";
170 i$=INKEY$: IF i$="" THEN GOTO 170
180 PRINT i$
190 WEND
200 END

```

Fig.5

```

10 REM Compute day name using Zeller's Congruence
20 GOSUB 9000: REM Set up user-defined functions
30 DIM day$(7)
40 FOR n%=1 TO 7
50 READ day$(n%)
60 NEXT n%
70 i$="y"
80 WHILE LOWER$(i$)="y"
90 INPUT "Day (1-31) "; d
100 INPUT "Month (1-12) "; m
110 INPUT "Year "; y
120 IF m<3 THEN m=m+12: y=y-1
130 j=FIX (y/100)
140 k=FN m(y,100)
150 PRINT "Day is "; day$(FN d(d, m, k, j) + 1)
160 PRINT "Want another day? (y/n) ";
170 i$=INKEY$: IF i$="" THEN GOTO 170
180 PRINT i$
190 WEND
200 END

9000 REM User-defined functions
9010 DEF FN m(n,d) = n-d*( FIX (n/d))
9020 DEF FN d(q,m,k,j)=FN m((q+FIX(13*(m+1)/5)+k+FIX(k/4)
+FIX(j/4)+5*j), 7)
9030 RETURN
9100 DATA "Saturday", "Sunday", "Monday", "Tuesday",
"Wednesday", "Thursday", "Friday"

```

2. Arrays can have multi-character variable names, such as days(), making their use more obvious.

3. An integer loop index, n%, is used to populate the array of day names.

Locomotive Software's CP/M operating system is not freely available. If you interested, you can buy a copy from Locoscript Software. Further, if you are serious about using CP/M on the Spectrum +3, you will find it much easier if you have a two-disk system as CP/M is a disk-based operating system: the default +3 ROMs are disabled and most of the system commands are accessed directly from disk. CP/M on the Spectrum +3 is an interesting product in its own right and it is possible to run a wide range of CP/M software on it. However, that is a different story, so I won't digress here.

BASin – Your Friendly Coding Teacher

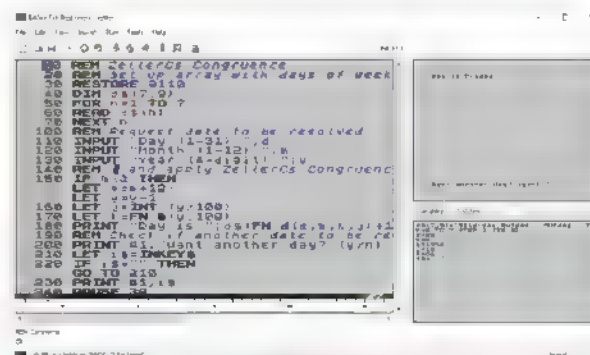
The final BASIC version that we look at in this section is not actually a different version of BASIC, but a modern-day development environment for Spectrum BASIC called BASin, which was first released in 2015 as part of a campaign called 'Every Child Can Code'.

Available for both Mac OS and Microsoft Windows, BASin is a useful application for both experienced and new programmers, as it provides a mix of 1980's Spectrum programming with 21st Century development tools. The additional features provided by BASin range from copy-and-

paste; quick-help for commands, as you type; and built-in documentation, from Stephen Vickers' original manual; through to tools for tracing and debugging your programs.

The programs you develop in BASin can be exported in a format compatible with other emulators or the ZX Spectrum Vega, and – with a couple of extra steps – can be turned into tape audio for loading into a real ZX Spectrum.

You can download a copy of BASin from the Every Child Can Code website [<http://everychildcancode.org/basin/>].



Coming up next issue:

George moves into machine code

WANDERERS CHAINED IN THE DARK

2014 Sam Style

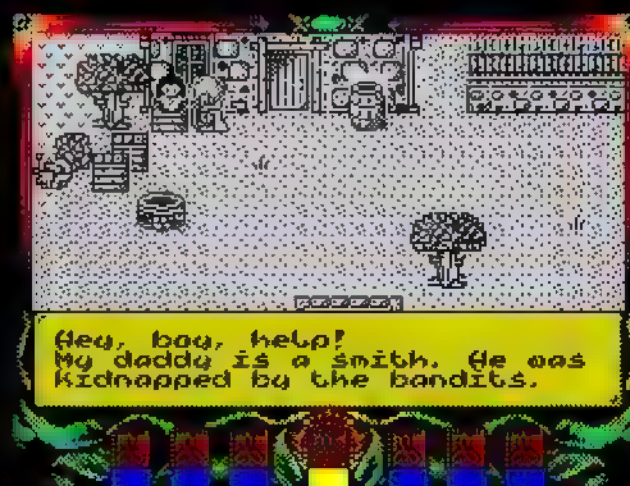
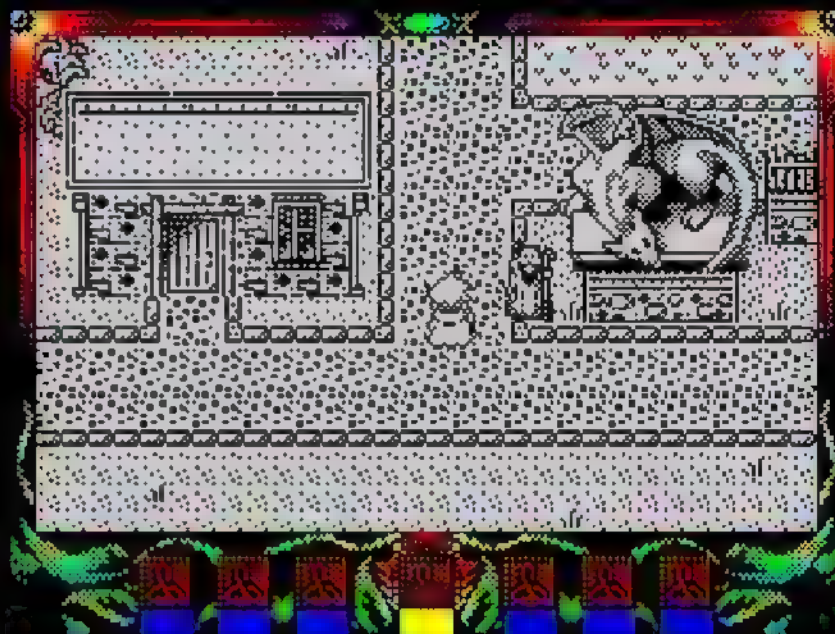
Wanderers, Chained in the Dark is one of those rare things on the Spectrum, a turn based role playing game, and what's more, it is excellent. Everything comes together beautifully to form a brilliant and engrossing game, but lets start at the beginning.

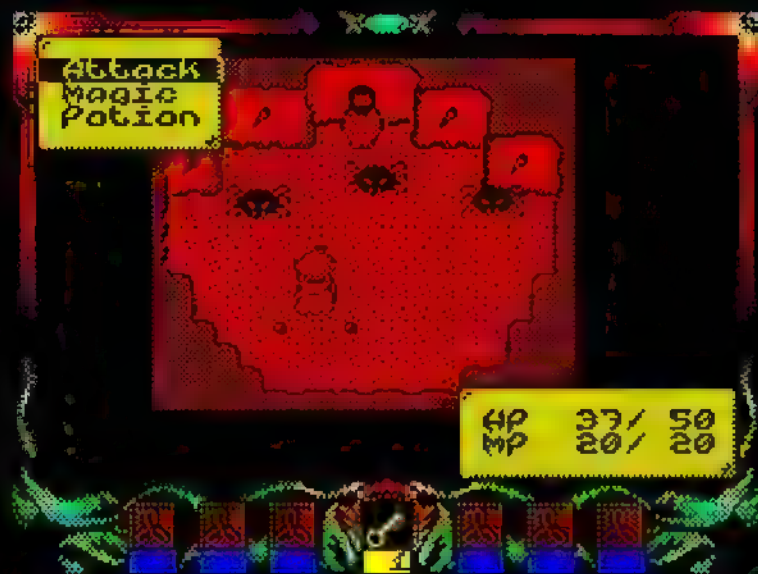
Although I couldn't find any back story and the intro refused to play, there is not a lot you really need to know as the story comes out through playing the game.

Not long into the game, probably about 10 seconds, you will meet a man who tells of a demon that needs destroying and thus starts your quest. Not long into this quest you will also find a little girl hiding, who asks you to find her father, so within a few minutes you have two to go at.

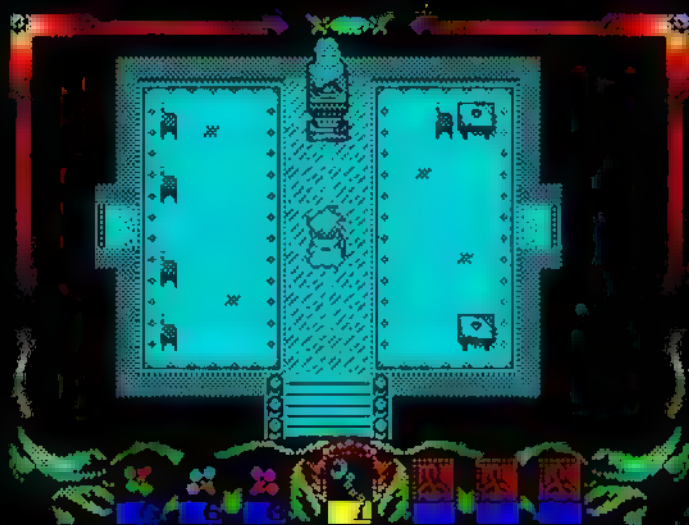
The menu system is really very good and easy to use, allowing you to talk, give, pick-up, use and operate items you come across. Getting this type of mechanism right is hard enough on modern games, but to get it perfect on the Spectrum is a fine achievement, and makes the game so much more fluid.

As for the fights, which there will obviously be, it isn't long before you come across some nasty spiders. Here each antagonist (you and the spiders) take turns to select an option such as attack or magic and see the damage done as a result.





As you attack, the spiders lose health, and they attack you back and with a bit of luck (and magic) you'll soon be celebrating your first victory.



The plot slowly unfolds and more quests are thrown at you, from finding dynamite, freeing a ghost and helping a poor knight become a hero.

As each quest is complete, you get given items. Some can be used to create other things, some can be used to solve puzzles and some are weapons and armour that can be equipped to improve your stats.

As you play there is some really great atmospheric music playing along which really immerses you in into the game world.

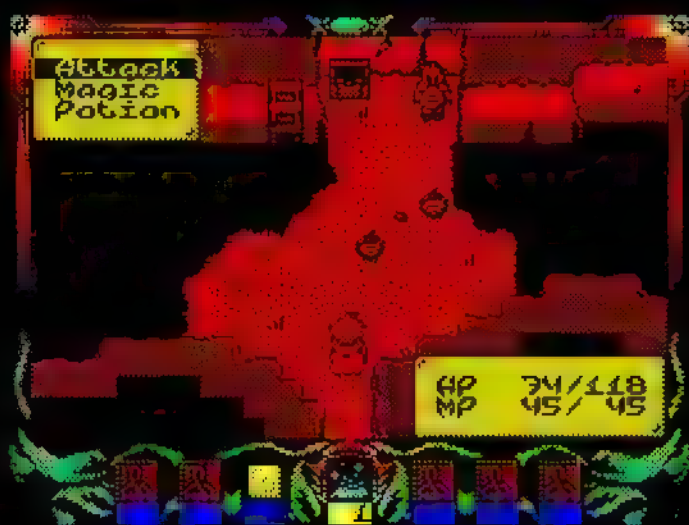
As you can see, the graphics are fantastic. Locations and characters are well drawn, the flip screen does not cause issues and the player moves smoothly. There is some lovely detailed backgrounds and each little character looks different.

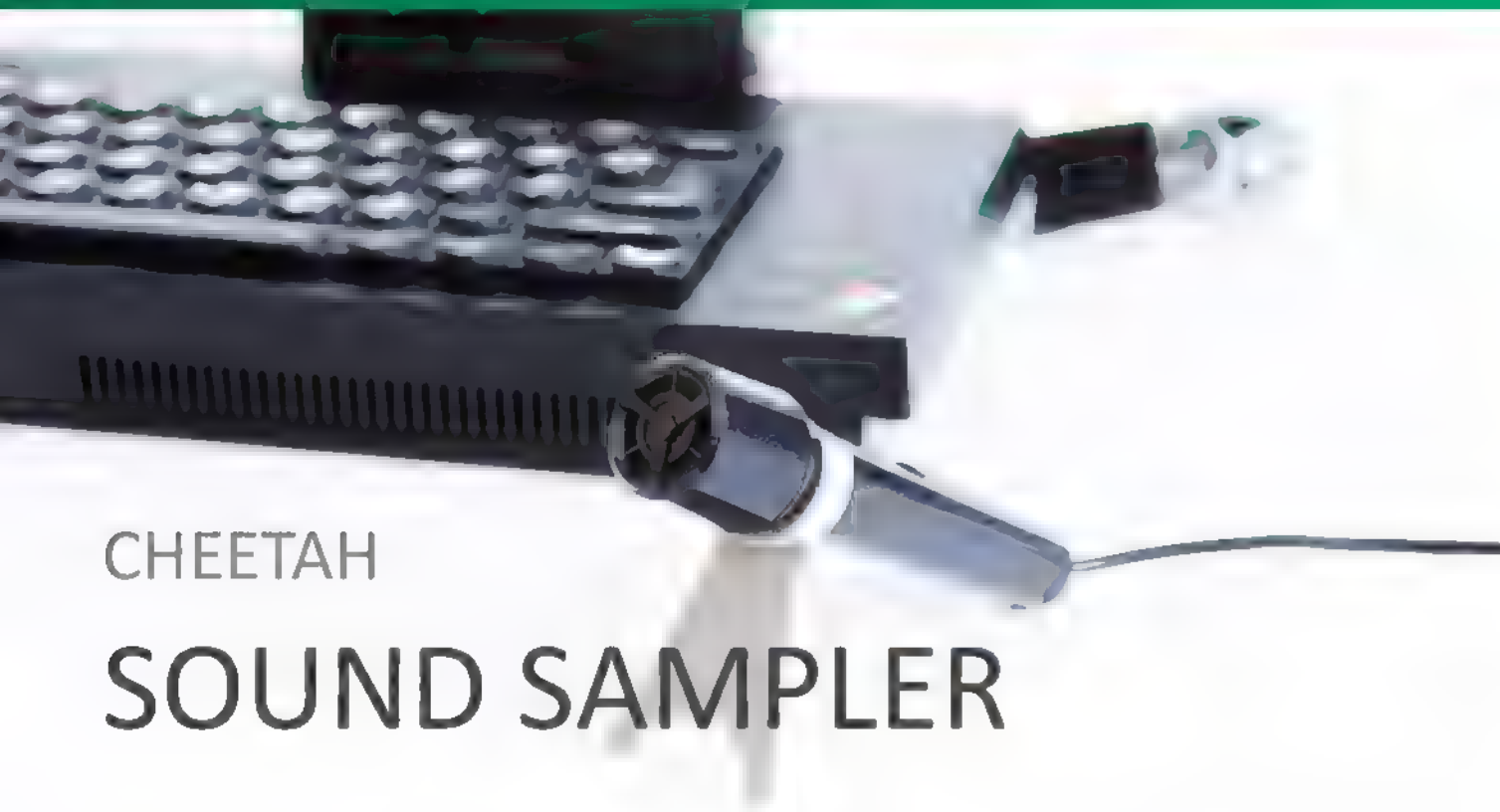
This is one of those game that draws you in and before long a few hours have flown past and you still want to continue to see what happens next.

I can't really praise this game enough. It's a great change from platform games or action games, and shows just what the little machine can do.

There is so much dialogue and nice touches to be found, even a bit of humour.

All in all, a really brilliant game.





CHEETAH SOUND SAMPLER

All the bells and whistles with Cheetah's Hardware Sound Sampler

In the last issue I looked at Easy Speak, ■ software sound sample from Quicksilver. Although software samplers work, to a lesser degree, they can not compete with dedicated hardware, designed specifically to do the job.

The Cheetah Sound Sampler is such a device, offering ■ sample frequency of 17.5Khz in a small, joystick adaptor sized package.

The box for the device depicts various sound sources the device can be used to capture and inside we get the software, a microphone and the interface itself. The microphone, although cheap and plastic, does the job, but for better results it is best to use a much better input signal plugged into the 2.5inch socket.



The interface is about the size of a joystick interface and has two rotary knobs on the front, a lead that connects to an audio device like an amplifier or television to output the sound and an input socket for the microphone. Because there isn't a manual, and I couldn't find one online, I have no idea what the knobs do, but hopefully we'll find out soon.

Setting it up is easy, just connect it your Spectrum, plug in the microphone and plug the output lead into something that can be used to amplify it, in my case a television, load the software and you are ready to start.

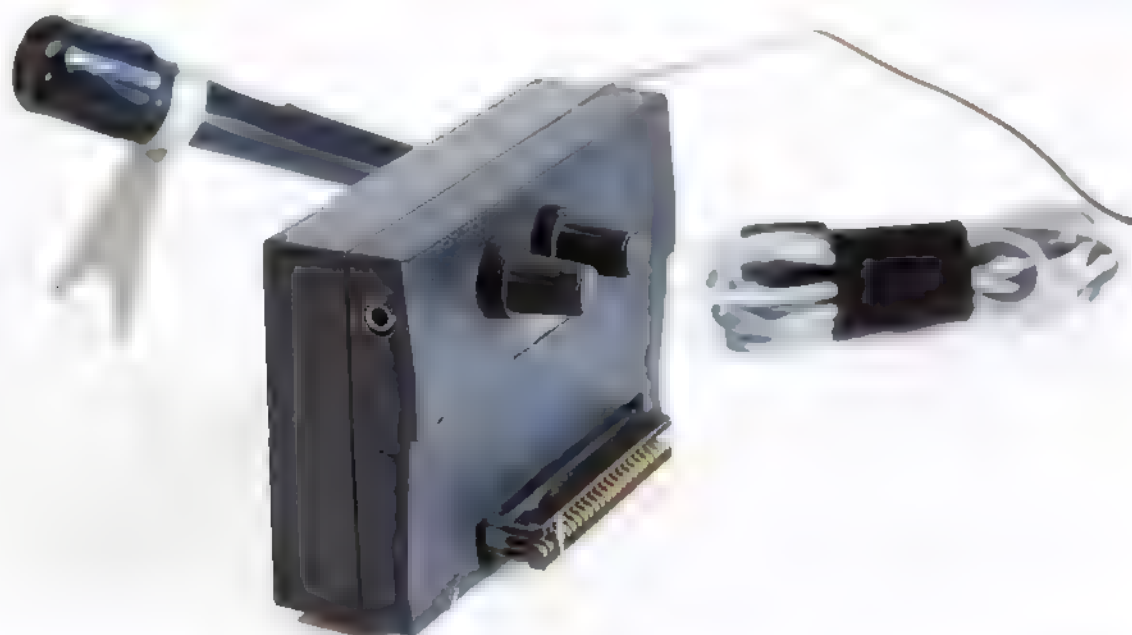
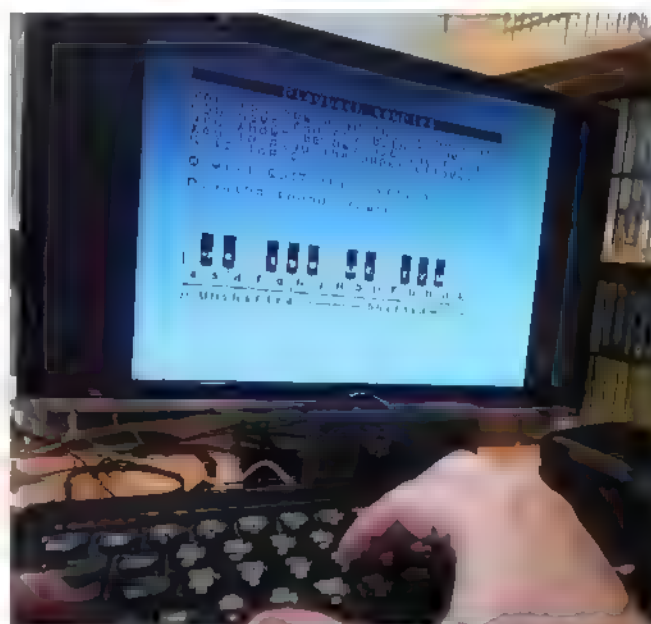
Once the software was loaded, you get a nice simple menu that gives the options to sample a sound, edit a sample or play back samples or select a RAM bank. This last option can only be used with 128k machines.

Making a new sample is easy, select SAMPLE A SOUND from the main menu, select automatic or manual trigger (I found manual easier to use) hit the start button and talk into the microphone.

You are then told how many units are free to hold your sample and this equates to the amount of RAM that can be used for the samples. When you first start you get about 116 which will give you about 4 seconds worth of sample.

You give you sample a name, select full or half speed and jabber away. Pressing space begins the whole process and it will stop ether when you press space to stop or time / RAM runs out.

To hear your wonderful creation the easiest way is to press 3 from the main menu and list the samples. This will play any samples you already have from the Spectrum's memory.



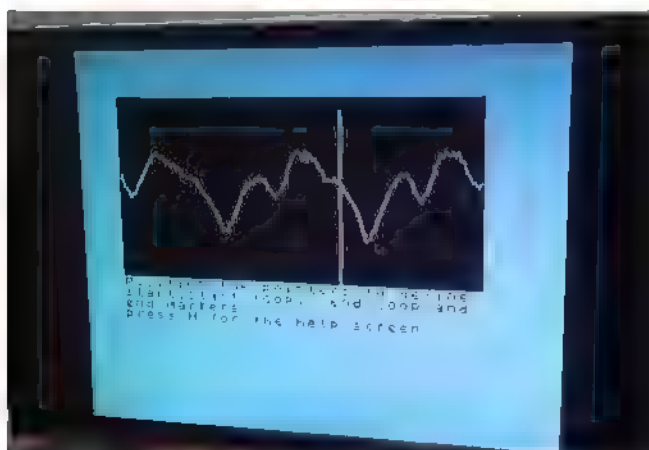
Cheetah Sound Sampler

The sound quality is not actually bad, a little quiet, even with my television turned up full, but still pretty impressive for an 8bit micro from the 80s.

You can now edit the sample, and you have to do this if you want to play it back using the piano built into the software.

In the editor you have to set four points. The start point, the beginning loop point, the end loop point and the end sample point. You have to set all of these up so the software knows how to play the sample.

You do this by pressing F to move forward or B to move backwards through your sample, which is displayed as a sound wave on screen with only a small proportion visible. When you see the waveform change, you know you are close and you can set the four points using keys 1,2,3 and 4.



It's now time to play the sample back in an 80's electro style.

From the main menu select 3 and then type in the name of your sample. It would have been easier to just select it, because you have to remember what you called it. You are then given the option of using sustain, but I heard no difference either way.

Then a piano keyboard is shown, meaning you are ready to start making music, or in my case, a lot of noise. Each

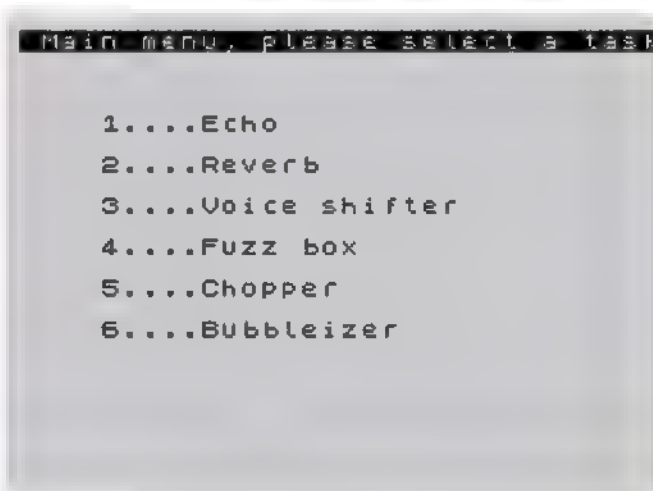
key plays the sample at a different pitch (and speed) but you can certainly have some fun with this.

Nnn nnn nnnn nnnnnnn nineteen!

Taking the samples into my PC and ramping up the volume gives you some idea of the quality you can get from using the supplied microphone, and it is fairly good. To improve it though you would connect a higher quality source such as a CD player. Doing this improved the quality and produced much clearer results.

The included tape comes complete with a selection of samples for you to play with along with some nice effects you can use. The samples included things such as a synth sound, glass shattering, and a cowbell.

Moving on to the sound utilities found later on the tape, and there is an impressive number to choose from.



Echo, reverb and bubbleizer effects work nicely to manipulate the sound direct from the microphone. Once set up the Cheetah Sampler converts the input in real time and sends the output to your amplifier (or TV in my case).

Some of the effects are quite good for an 8 bit computer with a 17.5 KHz sampler bolted on to it and you can easily

get sound effects often heard in Dr Who. You too can sound like Davros!

These effects allow you to change various settings using the two dials on front of the interface. This makes modifying the sound much easier than trying to do it via software settings or on-screen dials.

As a piece of hardware then, it's quiet good and as you would expect, it beats the software only offerings easily.

It's a pity there is no manual to tell you how to get the best out of it, or perhaps offer some ideas and examples, but trial and error make for better learning... apparently.

For its time, the Cheetah Sound Sampler is a fine piece of hardware, limited only by memory on the Spectrum and the quality of the input.



The new Argus Pro-personal.
Above all, a true 16-bit computer.



The Silly Bit...

...but no mention of powerful jets
incorporated into the case!

Argus Pro-personal
TERR
Computer



Reviewing the games
that came with the
Vega console

..but without instructions!

ELIMINATOR

I always enjoy a classic shooter, so when I found this game on the Vega I had high hopes. Originally released on a budget label by Alternative Software, it follows the usual format, fly left to right and shoot everything.

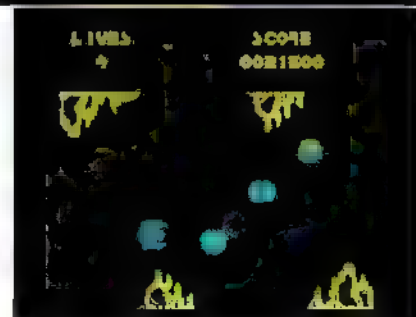
The landscape scrolls smoothly across the screen, although it is just the same repeated formations. Your pleasant looking and nicely animated ship has the usual controls. Left, Right, Up Down and Fire.

The aliens come in various forms, but only one type per level, with the first one being Killer Bubbles. Yes those pesky bubbles attack you in different formations, moving and firing, which makes it quite tricky.

There is one thing that lets this game down badly and that is sound. There is none. It's silent. This obviously means a very dull experience unless you put some music on or something.

Once you get past the bubble it's on to the Mutant Ships. These act much the same as the bubbles, so it looks like the author just swapped out the graphics. This is repeated as far as I could get with the other levels too, so the next wave, the Rings Of Death move exactly like the bubbles too.

If the game had sound it would be quite good to play on the Vega, and



it's the kind of game that suits the device well,
but the alien formations just gets boring.

FACTORY DAZE

What the hell is all this about?

Without instructions there doesn't seem much point to the game, and none of the keys I pressed seemed to do anything.

Let's look at the good things first, the presentation, music, graphics and sound are excellent. The music is especially good, with a nice jolly tune playing throughout.

Each screen has a number of conveyor belts and you are told how many toys are required to get to the waiting lorry at the bottom right.

When each level begins you chose something from a selection at the top of the screen and once you press select, the game just plays on its own as far as I could tell.

The blobs travel along the conveyors and when they reach the central point, they get blasted and a quarter of them get transformed into a toy.

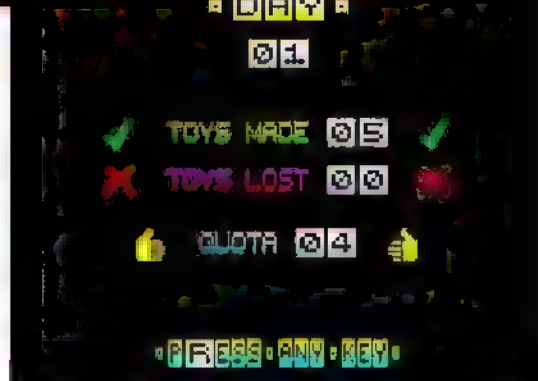
Eventually when they reach the bottom right, they are fully formed, drop into the lorry and the level ends. And I had to do nothing for this to happen.

The level ended, I got congratulated and the next one begins. I have no idea what the hell is supposed to happen or what I am suppose to control. It's kind of nice to watch, but seems totally pointless.

Obviously having instructions would have made the game more playable and potentially brilliant, but as it stands, it's a waste of a game.

A real pity as the game really shows off the Spectrum's sound capabilities.

We need instructions!



WARNING: MAY CONTAIN SPOILERS

GRUMPY OGRES

Adventure Page

When I was a young Ogre, back in the late 80s, my first real encounter with online gamse was through reading several magazines that often had features about a game called MUD. It was (probably) the first of its kind, so calling it MUD was the obvious thing to do. However, we now know that MUD (Multi-User Dungeon) is how we describe many such games.

The tales of wizards and witches teasing lesser players, strange goings on in mysterious lands and the potential to play a game with other, real people, sounded amazing. Once I got my first modem, a VTX5000, I was disappointed to find I could not connect to MUD. Apart from the cost, the modem was not really geared up for scrolling systems. (yes I know you could get software to do it – quit moaning!)

As I had joined Micronet 800, a sub area of Prestel specifically for micro computers, my attention was soon focused on their own

MUD called Shades. Even though it was a teletext service (look it up folks), they managed to force a text based game to be available for us eager adventurers.

Night after night I spent playing the game, collecting treasures and trying to move up in the ranks. The premise was simple, and one much copied in text adventures of the time, collect treasure, drop it in a location and score points. There were differences though.

Firstly, there were other players involved. They could get to the items first or even kill you if they wanted to. Often they would stop and chat or sometimes just shout out random things. A command allowed you to SHOUT things that all other players would see appearing on their screens.

Higher ranked players would often help out the novices and I recall one time I was saved from a pack of wolves by someone. I don't

recall the details (it might not have even been on Shades) but I was surrounded with no hope of surviving when all of a sudden, with a flash of white light, someone appeared, picked me up and whisked me off to a bedroom.

I must admit, at this point I was pretty confused and had no idea what had just happened. They 'emoted' (e.g. smiled warmly or something similar) and then vanished. It got me out of a tight spot and gained me some extra points because I was carrying a few items ready to deposit.

Another difference is game resets. Every 45 minutes the game would reset and all treasure items would be placed back at their start locations. This was to allow players to actually solve puzzles. Some items needed could be stolen by others and used to score points, leaving others lacking a sword when confronted by a wolf.

The game always warned you when a reset was imminent, and this would cause a mad rush to the drop points to cash in your items. Anything you carried would be lost during a reset, and if you didn't SAVE your progress, you would lose any points you had. This was sometimes annoying, especially when you lost your way with 100 points in your bag.

So why am I telling you this?

Recently I found that the game is still available to play! Yes, you

Welcome, Bar the Moving

Next Game Reset is in 34 minutes

Lost in Darkness

Although you did not recently return from your epic adventuring to the Land of Kness you have already grown weary of the fame and adulation that greeted your homecoming. Once more your craving for excitement has forced you to search out an entrance to another plane of the multiverse where magic works and logic can be really rather unreliable.....

A sign flashes in the darkness suggesting that you "Be Quiet"

A magical sign flashes "I" briefly before fading out.

Entrance Tunnel

You have arrived in a dark and gloomy tunnel born from solid rock. The walls are damp to the touch and you can hear the rustle of bat wings in the darkness above you. The tunnel runs east and west from here but unfortunately passage east is impossible as the rock of the tunnel has caved in creating an impassable barrier. Light can be seen filtering in from the west so that's probably not a bad direction to move in.

```

Drawbridge
You are standing in the centre of an old but sturdy wooden drawbridge,
which lies across a moat. The drawbridge leads across the moat to the
castle entrance through which you spy a large courtyard. Above the
entrance there is a plaque which reads "Scratch's Castle".
>>A burly guard strides in.
>>>
v
By the Moat
You are at the southern end of a courtyard and beside you there
is a moat. The castle drawbridge is to your right as you
stand facing north and there are several doors leading off
the courtyard.
The drawbridge is lowered.
A junior longsword (for almost nothing but has been dropped here)
>>get sword
get sword
You have taken the junior longsword.
>>i
i
You are currently carrying:
toy tiara
junior longsword
>>

```

can (depending on your status) re-discover or discover the game all over again. You can play it via Java (spit!) or use Telnet or one of the many mud clients you can get.

I quickly installed one, connected and created an account. This bit is messy, so pay attention and read the docs first.

Once created you can enter the real game, or in my case (and recommended for new players) the NOVICE area.

Here you can find simple challenges like opening the drawbridge and also pick up a few points quickly. You will come across treasure like a tiara, a gold coin and a sword, all of which can be dropped in the mad King's room for points. (don't forget to SAVE).

I want to say it was like visiting a familiar place, but some of the

locations and puzzles I do not recall. I may be confusing it with another game I used to play years later called Phoenix (no, not the arcade game!), but it was still great to get back into.

There were real players in the game, not to mention various computer-controlled characters wandering about, and in my rush for nostalgia I inevitably got killed! Yes, even in the novice game you can get killed, so be careful.

I thoroughly enjoyed my travels in Shades and looking back at some of my printouts from the original days, memories came back.

If you have never tried a MUD, Shades is a good introduction and is free to play.



CASSETTE 50

GAME BY GAME

21. Ten Pins

A game of a single key press! The ball moves along the bottom, you get two attempts to get the pins down. When you do, nothing happens.

22. Cars

When loaded this game calls itself Alley Driver! Steer a car (or a letter I) down a fixed course. Repeat! Yawn!

23. Stomper

An interesting idea. Chase a alien around a maze trying to catch it while being chased by a giant skull! By the way, you are a mouse (I think)!

24. Pinball

More a cross over with Batty to be honest. Keep the ball in play to score points, The physics are atrocious!

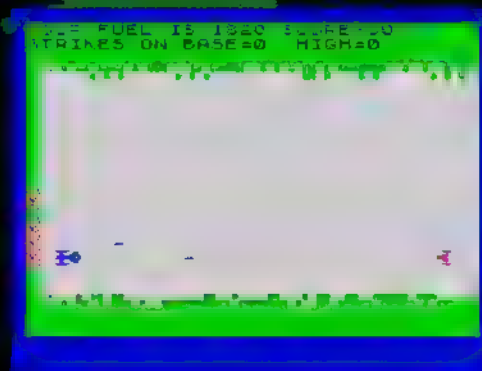
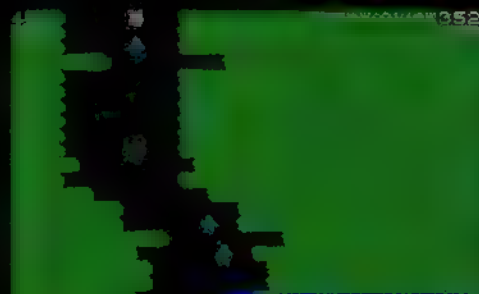
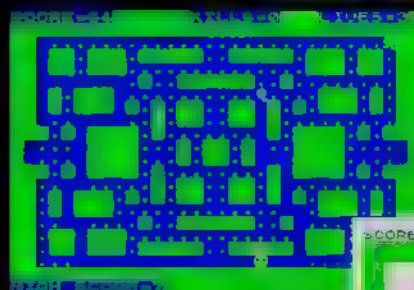
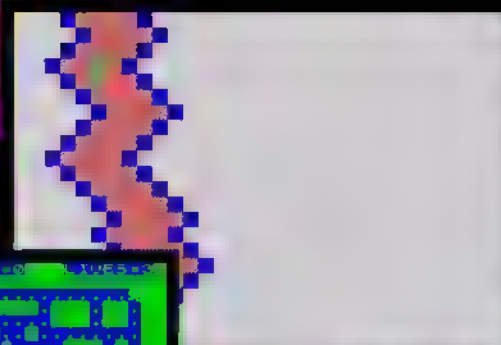
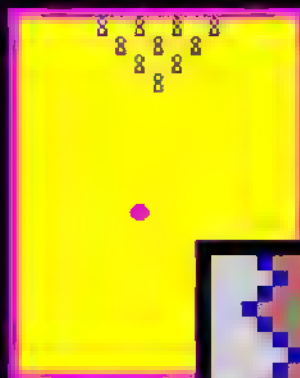
25. Caverns

Fly (at least I think it's a space ship) down the ever-moving cavern and rescue men by crashing into them. That always works!

26. Laser

Controlling a ship on the left, you have to dodge the lasers from the ship on the right as it approaches you. You can fire back, but have to hold the space key down so your laser moves all the way across. When anything fires the game stops to draw the laser!

SCORE=0



27. Alien

This is not a bad game to be honest, at least for a type-in. It is the usual invaders style thing, but stands out from the previous rabble. The only one worth even trying.

28. Cargo

The games are improving. Here you fly a helicopter trying to land on a ship. Missiles are launched and you have to dodge them. Once landed you have to get back to some huge hovering docking station at the top of the screen.

29. The Race

What was I saying! Here you pick a runner and then bet fake money on them. You start with 100. Dull, dull, dull.

30. The Skull

I have no idea what this is about! I had to break into the game to find the controls, and even then it's confusing. You can't move unless you press O, which is your laser. This lowers your score each time. This allows you to move about. Beyond that - I have no idea!

31. Orbit (aka Cargo Dock)

You (in a space ship) and a dot (cargo) orbit a planet (blob) and you have to dock with the cargo. To do this you move in (faster) and out (slower) of orbit paths until you catch it.

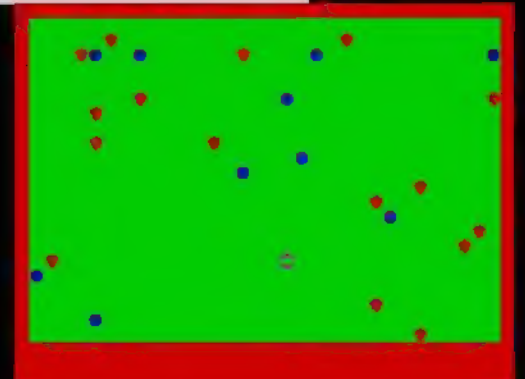
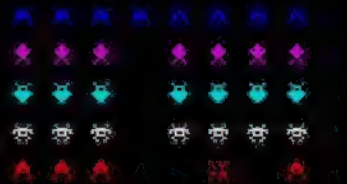
32. Muncher

Not a Pacman clone thankfully, but a dull game anyway. You control a pair of lips around a field eating strawberries. Random blue Nightshade berries pop up that can kill you.

Oh dear... my head hurts now.. Can I lay down for while?

SCORE=70

LIVES=2



FANZINE FANFARE

FAN MADE MAGAZINES FOR THE SPECTRUM

For many popular, and some not so popular hobbies, there have always been fanzines. Created by dedicated individuals, sometimes with the help of a few friends, these paper-based, self-made and self-printed mini-magazines were delivered by post to anyone who paid.

The style, content, layout and size were often restricted by the tools and devices available to the people or available at the time, and many were photocopied from original dot-matrix print outs.

Folded or just stapled together, these sheets were sent out to the waiting punters, full of the latest news about their specific hobby, often not covered by national magazines, or at least to a level that these people could do.

This trend still continues today, with people producing PDF magazines, myself included, although the focus has shifted to blogs, podcasts and Youtube channels. The idea though, is the same. Produce your own content aimed at a specific audience and enjoy yourself at the same time.

For the early computers, there were many such fanzines and the Spectrum had its fair share.

Examples included: Crashed, Desert Island, Microdrive Exchange,



From Beyond and more...

Some specific ones focused on particular piece of hardware such as the Disciple disc interface or the Microdrive.

The Disciple fanzine, called FORMAT started in 1987 and in-



cluded general news, Disciple news, Tutorials, tips on how to get software to work on the system and technical articles.

It is well laid out, clearly printed and changed very little during its long life, covering over ten years. For disciple users, this must have been a great resource.

The Microdrive one named Microdrive Exchange began life in 1984 with a four A4 printed sheets. The layout was, to be honest, non-existent. Just lines of text. The content was mostly tips for converting games to run off cartridges along with general Microdrive goodness.

It ran for just 24 issues, ending in 1986, with the end coming due to the many interfaces and multiface devices that could now save games to cartridge.

Many of the fanzines only ran for a few months, several managing 12 or more... and this makes them difficult to find based on the numbers produced. Certainly originals are hard to come by. The WOS archive though does contain a large quantity of scanned examples, ready to read through.

Later notable examples included Classics, a short lived but well produced fanzine covering many aspects of the Spectrum. It had reviews, a letters page, special features and random elements much like the later years of Your Sinclair.

Crashed was also popular, running from 1994 to 2000, this good looking fanzine included not only Spectrum material but Sam Coupe articles too. There were playing tips with pokes and maps, technical sections, PD sections and of course software reviews. They also had interviews with some pretty

well known people, which surprised me a little. The layout improved as the magazine got older with the addition of more images and better overall look.

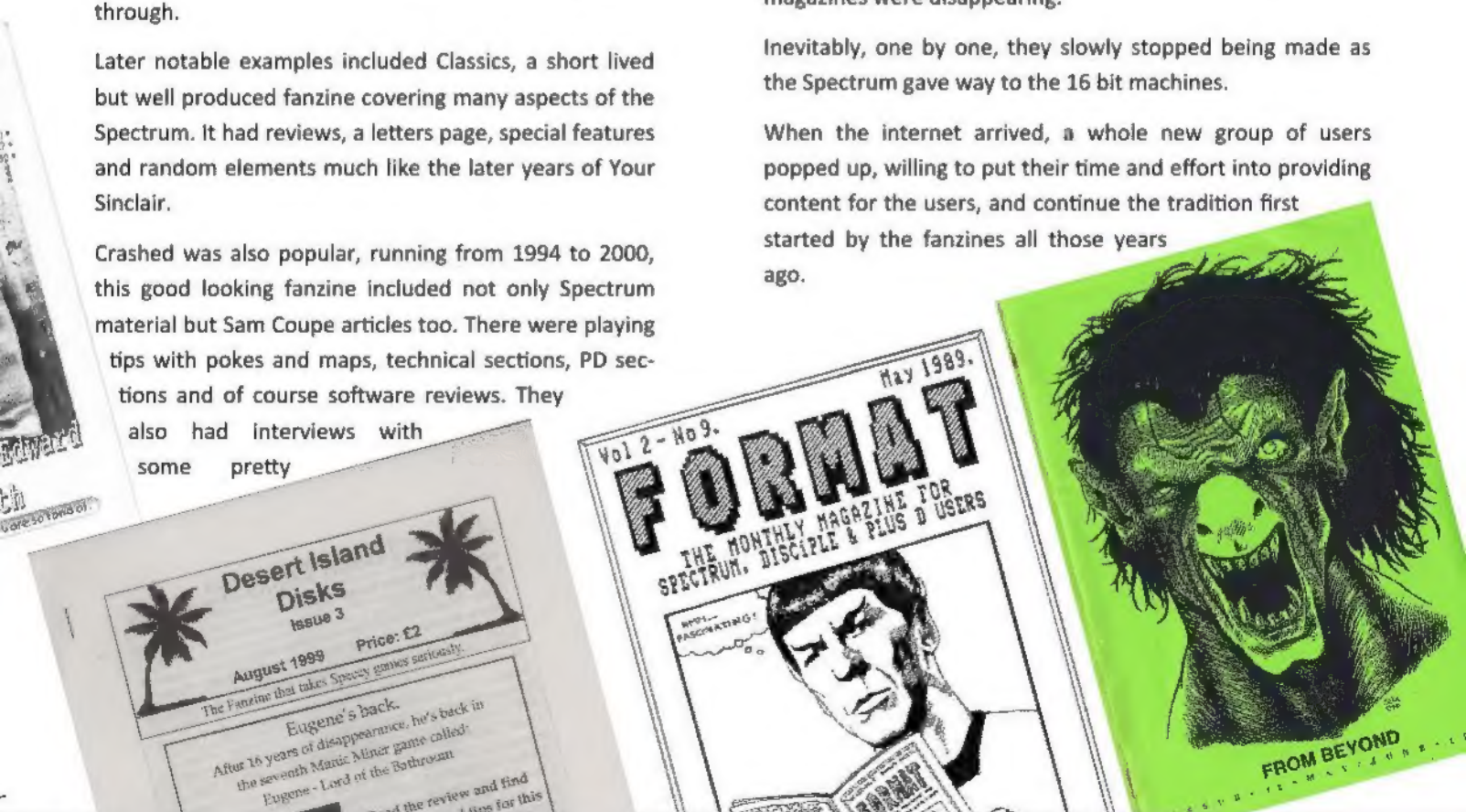
Another notable fanzine is the ZX Files. This well produced and great looking publication includes the usual things. News, editorials, game reviews, gossip and interviews. They also covered the emulator scene, PD scene, on-line forums and many more topics. Later issues even came with a cover tape.

Some fanzines focused on specific subjects such as adventure games. From Beyond was larger than most other fanzines at the time, often having more than 50 pages per issue. The content included news, a letters section, game reviews and help pages. The content was mainly text, even the reviews, but they sometimes published game maps.

Reading through the fanzines gives you a different angle to what the national magazines were producing, and it is clear the people that created them are enthusiastic and wanted to provide a service to other Spectrum owners when the retail magazines were disappearing.

Inevitably, one by one, they slowly stopped being made as the Spectrum gave way to the 16 bit machines.

When the internet arrived, a whole new group of users popped up, willing to put their time and effort into providing content for the users, and continue the tradition first started by the fanzines all those years ago.



DEEP CORE

RAIDER



Available from <http://cronosoft.orgfree.com>